

METHOD AND STRUCTURE FOR A COMPOSITE TRENCH FILL

ABSTRACT OF THE DISCLOSURE

5 A method and structure for a composite trench fill for
silicon electronic devices. On a planar silicon substrate
having a first deposited layer of oxide and a second
deposited layer of polysilicon, a trench is etched.
Deposition and etch processes using a combination of oxide
10 and polysilicon are used to fabricate a composite trench
fill. The trench bottom and a lower portion of the walls are
covered with oxide. The remaining portion of the trench
volume is filled with polysilicon. The method may be used for
junction field effect transistors (JFETs) and metal oxide
15 semiconductor field effect transistors (MOSFETs).